FORKLIFT

SERVICE MANUAL

50D-7E

HYUNDAI

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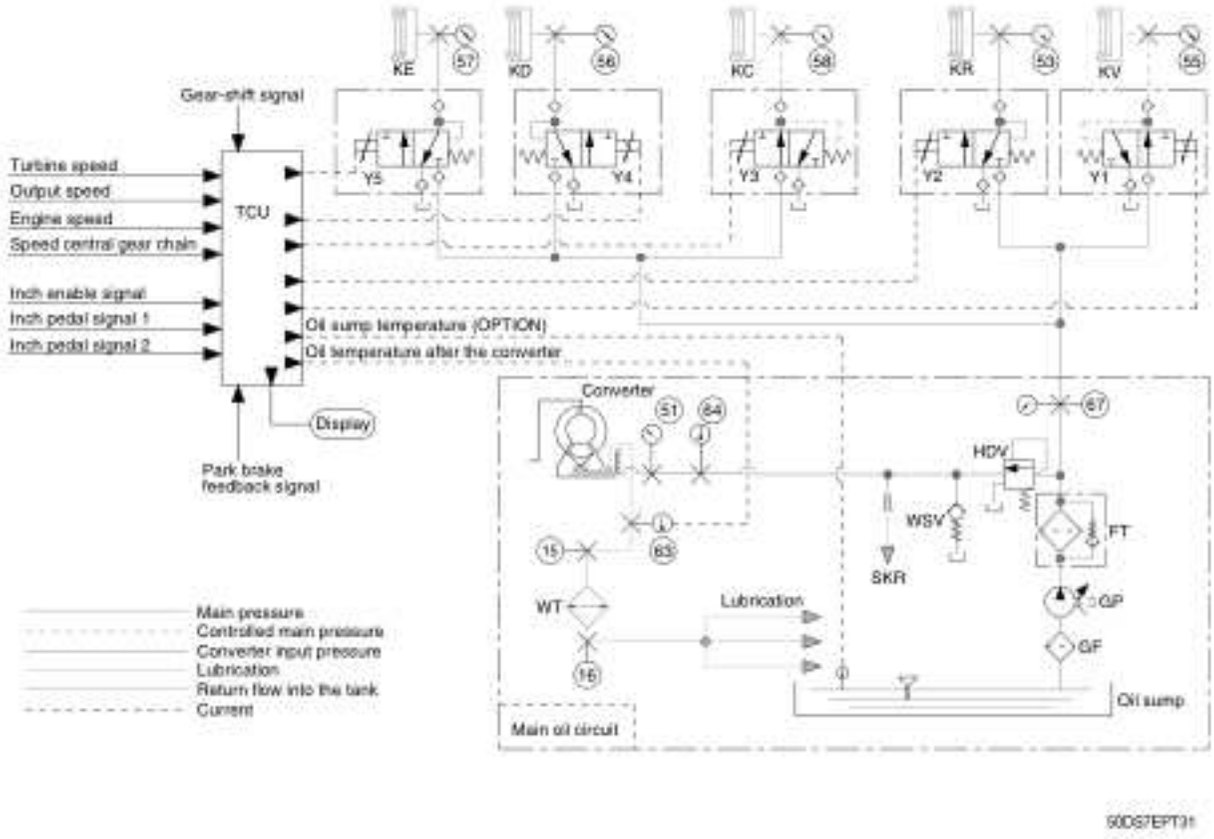
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· Hydraulic circuit



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Driving direction	Gear	Proportional valve under current						Engaged clutches	
		Y1	Y2	Y3	Y4	Y5	N		
Forward	1	●		●				KV	KC
	2	●			●			KV	KD
	3	●				●		KV	KE
Reverse	1		●	●				KR	KC
	2		●		●			KR	KD
	3		●			●		KR	KE
Engaged clutch		KV	KR	KC	KD	KE			
Curr. No. of meas. points		55	53	58	56	57			

GF	Coarse filter
GP	Transmission pump
FT	Filter
HVD	Main pressure valve, 16+3 bar
WSV	Converter safety valve, 11+2 bar
SKR	Lubrication of KR clutch
WT	Heat exchanger
Y1	Proportional valve, clutch KV
Y2	Proportional valve, clutch KR
Y3	Proportional valve, clutch KC
Y4	Proportional valve, clutch KD
Y5	Proportional valve, clutch KE
KV	KV clutch, forward
KR	KR clutch, reverse
KC	KC clutch, 1st gear
KD	KD clutch, 2nd gear
KE	KE clutch, 3rd gear
TCU	Transmission control unit

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4. REASSEMBLY OF DRIVE AXLE

Clean every parts with cleaner and then remove remained loctite.

※ **Be careful not to spill cleaner on your body.**
Avoid drinking cleaner or breathing its fumes.
Wear protective clothing, glasses and gloves.
If spilled on the skin, flush your skin with water immediately.
If swallowed, get medical attention immediately.

- Check wear, damage or crack for all the parts and replace if needed.
- If the teeth of gear are damaged, replace it as a set.
- Replace damaged tapered roller bearing.
- Do not reuse deformed shims or worn thrust washers.
- Polish the surface on which seal contacted if needed.

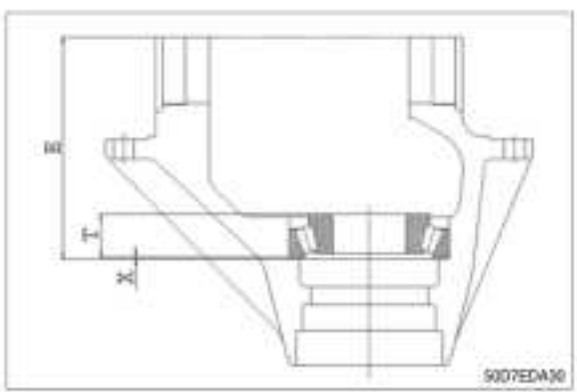
1) ADJUSTMENT OF BEVEL PINION SHAFT

Adjusting shims of bevel pinion shaft.

(1) Adjust shim thickness for the bevel pinion shaft with following method.
① Measure "**E**" distance on the housing.
② By the equation "**X = E - B - T ± C + 0.25** ", define the shim thickness(1).

B : Mounting dimension of bevel pinion shaft , 131.10mm (5.2 in)
T : Height of bearing.
C : Dimension of carved seal on the pinion. If there's no carved seal **C**=0.





EX) : From the housing
"**E**" = 162.85mm (6.4in)
B is factory dimension
"**B**" = 131.10mm (5.2in)
Front the bearing
"**T**" = 31.75mm (1.5in)
Carved seal on the pinion
"**C**"= 0.05mm (0.002in)
Shim thickness :
"**X**" = 162.85 -131.10 - 31.75 + 0.05
= 0.45mm (0.022in)

※ **If teeth are damaged, replace it as a set (bevel gear and shaft).**
Do not reuse damaged shims and bearings.

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Trouble symptom	Probable cause	Remedy
Lamps dimming even at maximum engine speed.	· Faulty wiring.	· Check for loose terminal and disconnected wire.
Lamps flicker during engine operation.	· Improper belt tension.	· Adjust belt tension.
Charge lamp does not light during normal engine operation.	· Charge lamp defective. · Faulty wiring.	· Replace. · Check and repair.
Alternator makes abnormal sounds.	· Alternator defective.	· Replace
Starting motor fails to run.	· Faulty wiring. · Insufficient battery voltage.	· Check and repair. · Recharge battery.
Starting motor pinion repeats going in and out.	· Insufficient battery voltage.	· Recharge battery.
Excessively low starting motor speed.	· Insufficient battery voltage. · Starting motor defective.	· Recharge battery. · Replace
Starting motor comes to a stop before engine starts up.	· Faulty wiring. · Insufficient battery voltage.	· Check and repair. · Recharge battery.
Heater signal does not become red.	· Faulty wiring. · Glow plug damaged.	· Check and repair. · Replace
Engine oil pressure caution lamp does not light when engine is stopped (with starting switch left in "ON" position).	· Caution lamp defective. · Caution lamp switch defective.	· Replace · Replace

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(7) After taking out connecting shaft, remove gear housing, drive gear and driven gear set from cover.

※ When removing the gear housing, keep it as straight as possible so that it can not happen scratch or damage to inner surface by touching gear teeth.
Inspect scoring or excessive wear of shaft and gear teeth for both drive gear and driven gear set.



(8) Remove lip seal from the cover.

※ When remove the lip seal from the cover, take care not to give any scratch or damage on the surface of shaft hole or seal bore.



4) ASSEMBLY

(1) Throughly clean seal bore, press the shaft seal in to the seal bore of the cover.

※ Uniform pressure must be used to prevent misalignment or damage to the seal.



(2) Assemble shaft to the cover.

※ Throughly clean mounting surface of the gear housing for the seals.

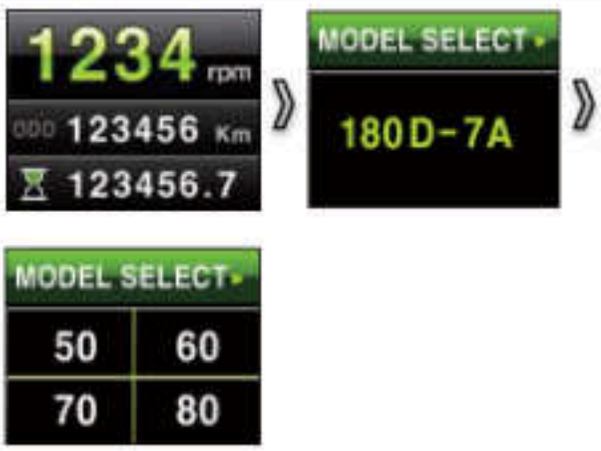
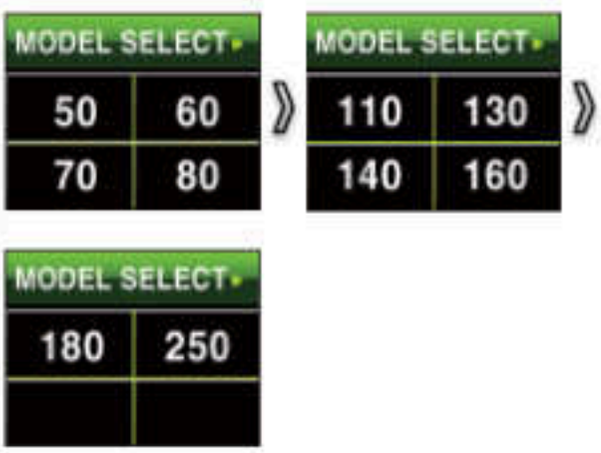
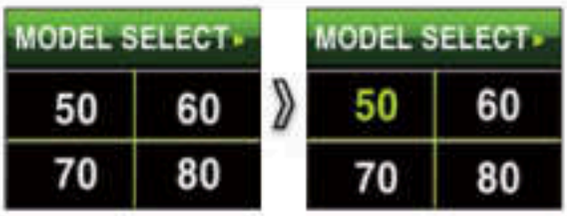
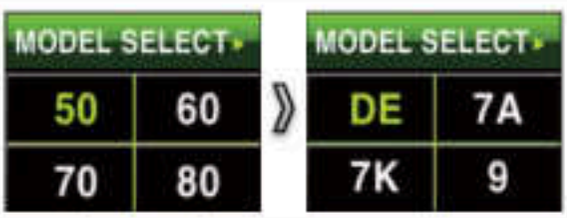


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(4) Menu and next buttons

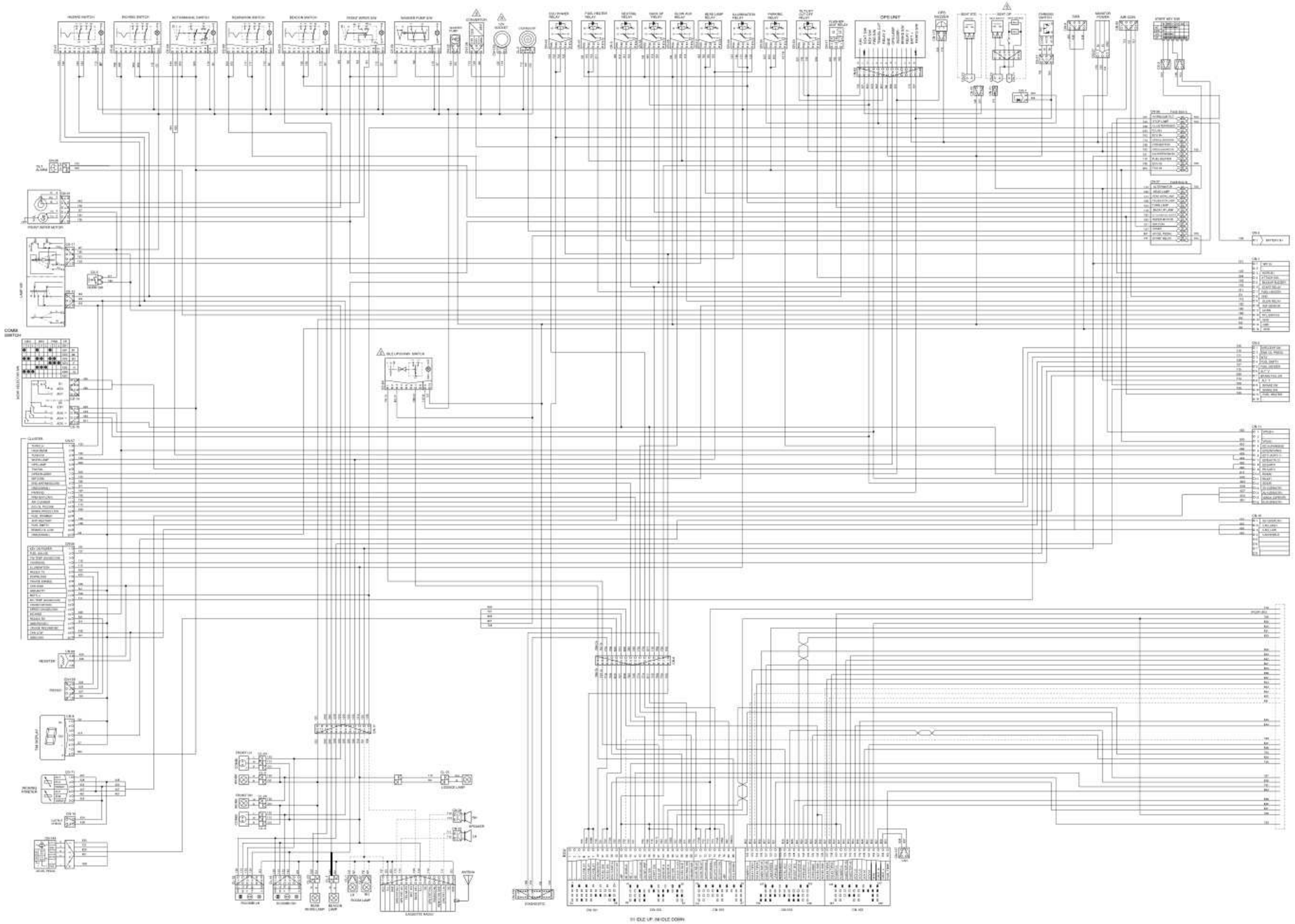


- These buttons are used to select the model select mode.
- The initial model is selected at the factory, so don't change the different model.

Display	Description
	① Press MENU and ▶ until model select mode is displayed, where parking is ON. To select model select mode, press ▶
	② To change another ton group, press ▶. (Equipment ton group screen)
	③ To set the location of ton group, press ⏎. And then to change another ton press ▶.
	④ To set the ton, press ⏎. Go to the equipment model screen.

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·ELECTRICAL CIRCUIT (1/6, 50D-7E: #0001-0307, 60D-7E: #0001-0031, 70D-7E: #0001-2506, 80D-7E: #001-0507)



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